

A COMPARISON OF PORP, TORP, AND INCUS HOMOGRAFT FOR OSSICULAR RECONSTRUCTION IN CHRONIC EAR SURGERY

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This report presents the results of 210 cases over a 10 year period using PORPs, TORPs and notched incus homografts (NIH), for ossicular reconstruction in chronic ear surgery. There were 192 adults and 18 children. The surgical technique utilized temporalis fascia in an underlay technique with canal skin covering the outer surface of the fascia. Intact canal wall mastoid-tympanoplasty, as a one-stage procedure, was used for most cases. Homograft nasal cartilage was placed between the Plasti-Pore prosthesis and the graft. Notched incus homografts were prepared prior to surgery and stored in 4% formalin. There were 149 mastoid tympanoplasties and 61 tympanoplasties performed. Revision of our cases was performed in 16.6%

Within 3 months of surgery, 86% of adults and 44% (8/18) of children had dry, healed ears free of disease. The graft take rate was 96%. In adults a total of 99 NIH, 50 TORPs, and 43 PORPs were implanted. In adults the closure of the air bone gap to 20 dB or less occurred in 58% using TORPs, 67% using PORPs, 76% using NIH-Partial replacement, and 20% using NIH-Total replacement. Excluding the cases that failed for reasons other than conductive hearing loss, the results improved to 69% for TORPs, 77% for PORPs, 77% for NIH-P, and 27% for NIH-T. In adults, the extrusion rate was 5.5% for Plasti-Pore and 3% for NIH. In children, the extrusion rate was 17% for Plasti-Pore prostheses.

From this study, it appears that PORPs and TORPs with homograft nasal cartilage are satisfactory prostheses for chronic ear surgery in adults. In children, Plasti-Pore prostheses should be avoided unless the ear is healed, aerated, and stable. NIHs are good prostheses when the stapes is intact, but they are inferior to the TORP when placed on the footplate. Also, the NIH requires preparation prior to surgery and may be difficult to obtain. We plan to continue using PORPs and TORPs in chronic ear surgery until a better technique is found or the complication rate becomes unacceptable.